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INTERNATIONAL ACTIVITIES OF THE UNITED STATES GOVERNMENT AGAINST THE INTERNATIONAL HIV PANDEMIC: A THREE-YEAR ACTION PLAN

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EXECUTIVE SUMMARY

In his memorandum of August 5, 1988 to the Secretary of State, the President directed the development of a three-year plan for international efforts against human immunodeficiency virus (HIV) infection, with emphasis on less-developed countries. The attached action plan summarizes the current international efforts by federal departments and agencies against the HIV pandemic and presents the strategy and plan for their programs for the period FY 1989-1991.

The HIV pandemic continues to grow rapidly. At present, 142 countries report 124,114 cases of the acquired immunodeficiency syndrome (AIDS) worldwide. The AIDS case count, however, represents only a fraction of the extent of HIV infection and is also subject to substantial under-reporting, particularly in the infrastructure-poor developing world.

HIV infection is transmitted in only three ways: through sexual activity, by the exchange of blood or blood products, or perinatally from mother to child. Worldwide, the dominant mode of transmission is through sexual activity.

The extent of HIV infection in many parts of the world and the potential for further spread make control and treatment of infection and related disease a major public policy challenge in many developing countries. The potential implications for the economic and political stability of these countries, their internal security, and regional security, make the control of HIV infection an important foreign policy issue for the United States.

Given the extent of infection and modes of transmission, a worldwide effort will be required to control the further spread of infection. Because of the exceptional public and private sensitivity of human sexuality in all societies, programs to control the spread of infection will require extraordinary social, cultural, and political specificity. These factors require that policy leadership in the worldwide effort be given to an organization such as the World Health Organization (WHO), which has the capacity to interact effectively on international health issues and can provide the framework for effective multilateral and bilateral coordination.

The modes of HIV transmission and the current level of technology dictate that control of the spread of infection will largely depend on changes in sexual behavior. At present, there is no vaccine to protect against infection and no treatment for those who are infected to prevent them from infecting others. Furthermore, there is at present no cure for AIDS or other HIV-related disease, and the limited methods of treatment available are only partially effective and very costly.

The principal program tools for eliciting voluntary changes in the behavior of those at risk of transmitting the infection are information and education. These must be targeted to those at risk and specific to their social, cultural, and political environment. There are encouraging signs that behavior will change when those at risk understand the full extent of the risks and the methods for avoiding them. However, the process of changing behavior will, even under the best of conditions, be slow.

The urgent need for HIV prevention and control worldwide demands the development of better tools. Of highest priority for research are a better understanding of the process of behavior change, an affordable, heat-stable vaccine against HIV infection, and affordable treatment regimens that prevent HIV transmission and development of disease, and, ideally, eliminate infection. Successful development and testing of these tools will depend on international collaboration.

The U.S. has committed itself internationally to support the WHO Global Programme on AIDS (WHO/GPA) in its planning and coordination of programs to control the spread of HIV and to undertake the research needed to eventually eliminate infection. The WHO/GPA has moved quickly and effectively to develop global and country-specific plans and expects to have put them into place in all cooperating countries within the next three years. Therefore, the WHO/GPA plan for the period from 1989 to 1991 is the framework for U.S. participation in the worldwide effort. The three-year action plan by federal Departments and Agencies outlines the implementation within that framework.

U.S. government actions against the HIV pandemic must be well-coordinated internally and internationally with those of the WHO/GPA and with those of other donor and recipient countries. Coordination mechanisms are in place and are expected to be strengthened in the next three years.

The three-year action plan presented here represents a continuation of extensive programs this Administration has already put into place, is consistent with and supportive of the major international recommendations of the Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic chaired by Admiral Watkins, and will begin to be addressed within the current budget plans of the concerned departments and agencies for the period FY 1989-1991. The action plan anticipates expansion of technical assistance and other activities for AIDS prevention and control worldwide and increasing effectiveness of these activities.

The following achievements are illustrative of the progress anticipated during the period of this three-year action plan:

1. All countries with which the U.S. is working will have implemented AIDS and HIV public information campaigns.

2. All of these countries will also have implemented, and most will have evaluated, targeted educational programs aimed at the reduction of high-risk behavior.

3. All of these countries will have implemented blood transfusion screening programs for HIV. There will be a safe source in each country, however, only a few will have ensured complete freedom of the blood supply from HIV infection.

4. New rapid, simple HIV diagnostics appropriate for developing countries will have been field-tested and will be in common use.

5. Development of vaccine field trial sites will have taken place.

6. Models of the economic and demographic impact of the pandemic in the developing world will have been completed and validated and will be in use to further understanding and to more effectively target HIV control strategies.

INTRODUCTION

On August 5, 1988 the President directed the Secretary of State to develop a three-year action plan for international efforts by the U.S. government against HIV infection, with emphasis on less-developed countries. This action plan was coordinated through the Department of State's Interagency Working Group on International Aspects of AIDS, which focuses largely on the foreign policy aspects of the epidemic, and through the International Subcommittee of the Public Health Service Federal Coordinating Committee on the HIV Epidemic (FCCIS), which focuses on the prevention and control of the epidemic internationally, and on related research.

U.S. Departments and Agencies are involved in the international effort to control the spread of HIV infection in a variety of ways (Appendix 1). Those in a first category have an explicit mandate for the health and welfare of the United States citizenry and undertake programs of research, analysis, and service delivery for the U.S. public at large. International collaboration and cooperation can strengthen these programs and may be essential to their success. This action plan covers the international part of their programs, particularly in the developing world (1). A second category has responsibility for a discrete segment of U.S. citizens at risk. For example, the Department of State medical department has responsibility for the health of Foreign Service personnel, the Veterans Administration for U.S. veterans, and the Department of Defense for U.S. military personnel. For these agencies, the level of their involvement in HIV-related issues is dependent on the degree to which HIV infection becomes important to their mission. A third category includes the Department of State, which has overall foreign policy responsibility, the Department of Defense, which has national security responsibility, and the Agency for International Development (A.I.D.), which has the specific mandate to help other nations in their economic development.

1 The Department of Health and Human Services (DHHS) has primary responsibility in this area. This action plan covers only the quantifiable international portion of the DHHS program. The domestic DHHS program and the importance of its contribution, particularly in research, is enormous. Any effort to segment the international portion unavoidably understates the value of these programs to international scientific collaboration, research, and capacity-building and to the people of the developing world.

This action plan reflects contributions by all U.S. government Departments and Agencies known to be involved in international efforts to control the global HIV epidemic. As all agencies give priority internationally to prevention and control, health care issues are not considered except in the broad context of their economic and social burden.

The action plan summarizes existing activities and outlines their trends for FY 1989-1991. It is divided into seven sections: 1) a global review of the ever-changing status of the pandemic and its relationship to U.S. interests, 2) international collaboration to control the spread of infection, 3) international AIDS prevention and control activities of U.S. Departments and Agencies, 4) international AIDS-related research activities of U.S. Departments and Agencies, 5) coordination mechanisms, 6) budgetary implications of the plan, and, finally, 7) conclusions about the directions and goals of the U.S. government in its efforts to control HIV and AIDS.

THE PANDEMIC AND ITS RELATIONSHIP TO U.S. INTERESTS

The HIV pandemic was first recognized seven years ago. It is still in its early stages. Our knowledge about the magnitude of the pandemic, its modes of transmission, its impact, and its relationship to U.S. interests has progressed rapidly.

The Magnitude of the Pandemic

At present, 142 countries on every continent report 124,114 cases of AIDS. The AIDS case count, however, represents only a fraction of the extent of HIV infection and is also subject to substantial under-reporting. Because of the long latency period between initial infection with HIV and the onset of AIDS or other HIV-related disease, a given AIDS case reflects an HIV infection that may have begun eight or more years earlier. More recent infections often remain asymptomatic and undetected. Furthermore, AIDS manifests as a variety of opportunistic infections which may be recorded as tuberculosis or common diarrhea, or in many parts of the infrastructure-poor developing world, not recorded at all.

Current estimates are that over 250,000 cases of AIDS have already occurred worldwide and that five to ten million people are infected with HIV, the causative agent of AIDS. Within the next five years, about one million new cases of AIDS will occur.

The best AIDS case reporting is in the developed world, where the count continues to grow. The largest number of cases already reported is in the United States, which had recorded 76,670 AIDS cases by October 26, 1988. In western Europe, as in the United States, Canada and Australia, the incidence is moderate to high.

The continent which is hardest hit by HIV infection, however, is Africa, where under-reporting has resulted in marked underestimates of the number of cases to date. The actual total is estimated to be higher than the number reported for the United States. Studies of the prevalence of HIV infection have provided alarming results. In many urban centers of Southern and Central Africa, 5% to 20% of the sexually active population has been infected with HIV. Rates of infection of some urban prostitute groups range from 27% in Zaire to 88% in Rwanda. Over half of the patients on some medical wards of hospitals in these countries are infected with HIV, as are from 10% to 25% of the women of childbearing age.

Asia and Latin America have smaller but growing problems, while the magnitude of the problem in parts of the Caribbean rivals that in Africa. In Asia and the Pacific, the incidence

of AIDS is quite low, but there are disturbing reports that 16% of the drug users in Bangkok, Thailand and 13% of the paid professional blood donors in one city of India are infected with HIV. In Latin America, approximately 8,000 cases had been reported by June 1988 but, because of under-reporting, the actual incidence is estimated to be several times that number. In several urban areas of the Caribbean, HIV infection levels among heterosexual men and women and their children are similar to those in Central and East Africa.

Modes of Transmission

As knowledge increases, it remains clear that HIV can be spread in only three ways: sexually, through blood and blood products and perinatally from mother to child. Sexual transmission predominates worldwide and can occur during both heterosexual and homosexual intercourse. Although early cases of AIDS in the United States were largely confined to adult males, in many developing countries, men and women have been equally affected. The risk of sexual transmission increases proportionally with the number of sexual partners an individual or his or her partner has. Sexually transmitted diseases that produce genital sores, such as chancroid, herpes, and syphilis, also facilitate transmission.

Exposure to infected blood and blood products is the second most important mode of HIV transmission worldwide. While transmission via contaminated blood transfusion in the United States has been virtually eliminated by screening, the required equipment, reagents and training are only sporadically available in many other parts of the world. Intravenous drug users, who often share their needles, can also transmit HIV. Nevertheless, the use of needles and syringes for therapeutic injection appears to carry a low risk of infection, even when sterile procedures are not followed. Contrary to early fears, childhood immunization programs in the developing world have not been associated with HIV infection.

Finally, HIV can be transmitted from mother to child during pregnancy and childbirth. There is evidence that the virus can also be present in a mother's milk but no confirmed evidence that breastfeeding is a route of transmission.

The Impact of AIDS on the Developing World

The greatest impact of the pandemic will be on the individuals who suffer the ravages of the infection. Nevertheless, the impact and costs of the infection will spread far beyond the individual to family and society. Economic

consequences include increased direct health-care costs, lost wages and the costs of lost business (e.g. tourism). The effects on society could include changes in family, social, and political structures.

A very large number of people are infected with HIV or will become infected. This means that they will develop symptoms of one or more opportunistic infections, develop a type of cancer, suffer diminished mental capacity and/or require frequent hospitalizations during the last 12 to 24 months of their lives. During this time, they will no longer be able to support and care for those who are dependent on them, and they will become dependent themselves, draining the emotional and financial resources of those around them.

The spread of HIV among adults also threatens the survival of children. The HIV pandemic threatens children directly, through HIV transmission from mother to infant and through blood transfusions for children with diseases like malaria. It also threatens children indirectly. A child with an infected parent is likely to lose that parent, and in time, both parents. In Central Africa as many as 1 in 5 urban children face this situation. Thus the AIDS epidemic may well undermine the hard-won gains made in increasing the health status and survival of children in the developing world.

The economic consequences of the pandemic are easy to conceptualize. First, the medical needs and costs of medical care for afflicted individuals will far exceed the capacity of health systems in the developing world. Second, the premature deaths in the 20-to-49 age group will be felt economically in loss of manpower, wages and production. Financial responsibility for surviving family members will fall on grandparents, siblings and more distant relatives. The ratio of dependent children and elderly adults to productive young adults may change significantly. Third, AIDS may affect specific industries such as travel and tourism. The effect on tourism in Haiti was seen after that country was identified as an endemic area. Tourist travel plummeted with an immediate effect on the hotel, transportation and related industries.

Other consequences of AIDS for societies may include changes in population size and character. AIDS-related increases in death rates have led to speculation that sub-Saharan Africa would be depopulated. These dire predictions are probably incorrect, however. The substantially increased death rate will likely be offset by ongoing fertility-related population increases of 3 percent or more annually. The virus, however, preferentially strikes young urban adults, who are among the most productive members of society. The loss of these individuals will have a disproportionate effect on productivity, economic development and education.

Impact on U.S. Foreign Policy

U.S. foreign policy interests will continue to be affected by the pandemic. As outlined above, the pandemic may result in diminished political stability of the hardest-hit countries. HIV infection may have a profound effect on military forces and readiness in developing countries. The size of the population available for military forces will decrease because of the increased death rate in the 20-to-49 year old age group. The potential for strategic imbalance and regional conflict in areas of importance to the U.S. may increase. The pandemic has also, moreover, impaired the ability of the State Department to carry out its political mission. Areas of impact include travel restrictions (imposed by the U.S. on incoming travelers and on U.S. travelers by foreign countries), and the negative effects of disinformation campaigns conducted by other countries.

One need only look at HIV-related travel restrictions to see some of the global political implications of the pandemic. Testing for HIV has been instituted for employees and dependents of the Department of State who are scheduled for foreign assignments. Employees and dependents of 40 other agencies who are beneficiaries of the Department's health program are also tested. The policy was prompted by medical concerns that overseas health-care facilities are often inadequate and because of concern for the supply of HIV-free blood.

The rationale for testing military applicants and active duty personnel is that the condition existed prior to appointment or enlistment; DoD avoids potential medical costs and the possibility that the individual will not complete his or her service commitment; clinical evidence indicates that individuals with serologic evidence of HIV infection may suffer adverse and life-threatening reactions to some live-virus immunizations administered at basic training; an individual with serologic evidence of HIV infection is not able to participate in battlefield blood donor activities or other blood donation programs; and presently there is no way to differentiate between individuals with serologic evidence of HIV infection who will remain healthy and those who will develop AIDS.

The U.S. is also one of the growing number of nations that requires HIV testing for immigrants or travelers. HIV-related travel restrictions limit freedom of travel, restrict business transactions, and, in the case of student travel, curtail educational opportunities. The U.S. implemented a testing requirement on December 1, 1987 for those applying for immigrant or refugee status. HIV-infected individuals are automatically ineligible to immigrate to the U.S. The U.S. has not established testing requirements for tourists, students, businessmen or other

temporary visitors with the exception of the requirement by the Department of Defense that all foreign military trainees enrolled in Defense-sponsored programs in the U.S. be tested (in compliance with previously existing and long standing examination and testing requirements for other infectious disease).

Our foreign policy has also been affected by disinformation campaigns. In 1985, the Soviet Union launched a disinformation program alleging that the AIDS virus was a man-made organism which had escaped from a U.S. military facility devoted to germ warfare. The U.S. has vigorously refuted these charges by making available as much factual information on the campaign and on AIDS as possible. Soviet scientists have disavowed these baseless charges and, in fact, the Soviet Union is a signatory to a United Nations General Assembly Resolution wherein the virus is designated as a naturally-occurring agent of undetermined origin. However, the charge sporadically continues to surface around the world.

The HIV pandemic is clearly a worldwide problem of major importance to the United States. U.S. federal departments and agencies have been prompt in participating in the multilateral response to the pandemic as well as in their bilateral prevention and control and research efforts. The next three sections will describe these activities.

INTERNATIONAL COOPERATION: THE WORLD HEALTH ORGANIZATION GLOBAL PROGRAMME ON AIDS

Given the extent of HIV infection and modes of transmission, a worldwide effort is required to control the further spread of infection. With current technologies, control of the spread of infection will involve changes in sexual practices. Because human sexuality is a matter of exceptional public and private sensitivity in all societies, programs to control the spread of infection will require extraordinary social, cultural, and political specificity. These factors require that policy leadership in the worldwide effort be given to an organization such as the WHO Global Programme on AIDS (WHO/GPA), which has the capacity to interact effectively on international health issues and can, together with the United Nations Development Program (UNDP), the United Nations International Children's Emergency Fund (UNICEF), and the World Bank, provide the framework for effective multilateral and bilateral coordination. The U.S. was a leader in urging the establishment of the WHO/GPA and continues to be its largest political and financial supporter.

The WHO/GPA is an extrabudgetary program of WHO and is funded by a group of donors whose contributions are made in addition to any assessed dues to the United Nations or WHO. The U.S., through the A.I.D., was the first such donor, contributing $2 million in 1986 directly for AIDS control. In 1987 the U.S. contribution to the WHO/GPA was $5.5 million; in 1988 it was $15 million; and in 1989 the amount is $25.5 million, over 25% of WHO/GPA's annual budget.

The U.S. also makes important contributions to management and direction of the WHO/GPA. The current WHO/GPA Director is a U.S. civil servant detailed from the Public Health Service. A.I.D., as the largest donor to the program, is a key member of the WHO/GPA Management Committee, which makes recommendations to the Director-General of WHO on the direction and management of the program. U.S. government scientists are members of most or all of the WHO/GPA's scientific and technical advisory bodies.

The WHO/GPA provides two critical services. It provides leadership in the planning, coordination and evaluation of national AIDS plans in all countries seeking cooperation, and it provides a mechanism and support for international coordination in all scientific areas necessary to the control of HIV infection. Its effectiveness in both of these areas is enhanced by a relationship with UNDP that broadens the relationships with developing country governments to include ministries other than the Ministry of Health.

By 1991, the WHO/GPA projects the following programmatic results. In the area of support to National AIDS Programs, the WHO/GPA will have provide planning and coordination assistance to 131 countries, and it will have undertaken technical collaboration with 54 more. National AIDS Prevention Plans will have been implemented in all 131 countries, with review and reprogramming completed in 120 of them. In the area of research, one of the primary objectives of the WHO/GPA, functioning centers for drug and vaccine trials will have been established and will be operational; vaccine and treatment trials will be underway. The reagent bank will be expanded, and new diagnostic technologies will have been evaluated in the field. The results from communications research will have been applied in the field. Finally, demographic models for projecting the course and implications of the epidemic will be have been evaluated and improved and will be in use.

The WHO/GPA budget has risen rapidly since the program began. In 1987, the worldwide WHO/GPA program cost $23 million. In 1988, the budget rose to $66 million. The preliminary budget for 1989 is $94 million. WHO/GPA anticipates that its annual costs will rise to $100-110 million and stabilize at that level in real terms. Within this budget, approximately 50% is devoted to national AIDS programs and the balance to research and regional and multilateral coordination and collaboration. The U.S. provides approximately 25% of the WHO/GPA budget through A.I.D.

The WHO/GPA national plans are the best available approximation of the cost of AIDS prevention and control programs in the developing world. When all national plans are in place, current estimates are that their total annual cost, including the cost of WHO/GPA planning and coordination, could approach $750 million, of which the external assistance cost to donors is approximately $400 million. Field implementation of prevention and control programs on this scale by WHO/GPA would require a massive expansion of WHO/GPA staff and supporting bureaucracy and would duplicate the existing field program capacities of many donors. Consequently, the WHO/GPA is focusing its attention and resources on planning, coordination, and evaluation needs and is the financier of last resort to ensure that all national programs are adequately supported.

Originally, the WHO/GPA budgeted funds sufficient to cover 20% of the cost of any national plan, however, experience has shown that bilateral assistance accounts for a much larger proportion of the support for these plans. To date, there have been 14 country pledging sessions to fund these plans, all but one of them in Africa. All of the plans were oversubscribed by bilateral and other multilateral donors with the result that the WHO/GPA was only required to support 8.5% of the cost of the plans. These first 14 pledging sessions were held in the

hardest-hit African countries and had received worldwide attention. Consequently, they may not be a reliable indicator of the support likely in other countries where HIV infection is not considered as urgent a priority. The U.S. was the largest contributor to these first pledging sessions and will need to continue a bilateral as well as a multilateral leadership role if the WHO/GPA worldwide efforts to control the spread of HIV infection are likely to succeed.

The WHO/GPA has done an outstanding job of putting into place a global and country-specific AIDS planning process, for prevention and control, and for research. Implementation of this planning depends on the existence of a set of vigorous, flexible, and responsive bilateral assistance programs capable of undertaking activities in the priority areas of these plans. The aggregate of these plans therefore serves as the plan for U.S. international actions for the next three years. The specific actions of the U.S. implementing agencies are presented in the next two sections.

INTERNATIONAL PREVENTION AND CONTROL ACTIVITIES OF FEDERAL DEPARTMENTS AND AGENCIES

U.S. international prevention and control activities focus on the developing world. This section describes the U.S. strategy, current activities, and plans for the next three years.

Prevention and Control Strategies

Sexual transmission is the most common mode of transmission of HIV and is therefore the highest priority for prevention. Although prevention and treatment of sexually transmitted diseases may have some effect on transmission, the principal tool currently available is provision of information and education aimed at reducing high-risk behavior. Information and education programs can be divided into three categories: public education campaigns, education and counseling of infected individuals and education targeted specifically at those who practice high-risk behavior. Massive public education campaigns, such as the one undertaken by the Surgeon General in the U.S., are one way to teach people about HIV infection and ways to avoid it. They are underway around the world. Although these campaigns have resulted in rapid knowledge gains, there is little evidence that they alone will significantly change behavior.

A second way to prevent sexual transmission is to counsel individuals who are infected. It is unfortunately true, however, that a person can be infected and infectious long before the onset of any symptoms. In order for a person to know that he or she is infected, that person must know that he or she is engaging in a high-risk behavior and therefore seek confidential counseling, or must develop symptoms which require medical testing or treatment. Thus the disease is being spread by people who are unaware that they are doing so.

Because these factors make it difficult to reach all infected individuals, an important third strategy for reduction of sexual transmission is to target AIDS counseling and education for individuals who practice high-risk behaviors. This counseling and education focuses on faithful relationships and condom use. If it were possible to ensure that every sexual union occurred within a faithful relationship or involved a condom, sexual transmission of HIV would be dramatically slowed today. This is obviously an unreachable goal. Condom usage worldwide is extremely low, nevertheless even a doubling or quadrupling of condom usage by individuals at high risk of infection could have a significant impact on the spread of HIV. The condom is still one of the best tools presently available for limiting the spread of the infection.

The second priority for limiting the spread of HIV is to prevent transmission via transfusion of blood and blood products. Prevention techniques involve testing donated blood for the presence of HIV antibodies and discarding infected blood. In the U.S., the necessary training and equipment are generally available, and the blood supply is considered to be safe. This has not been the case in developing countries. Therefore, one major element in the strategy of HIV prevention and control has been to provide training for blood testing technicians, and reagents and equipment for the routine testing of blood samples.

Other modes of transmission appear to be less important and therefore of lower priority in the developing world. To date, intravenous drug use has not emerged as a major mode of transmission internationally, except in Thailand. Prevention efforts will rely on behavior-change methods similar to those used to reduce sexual transmission. Use of contaminated needles and syringes for therapeutic purposes such as immunization, while not a major mode of transmission, can and should be avoided by upgrading of supplies and training. Mother-to-child transmission is best approached at present through primary prevention by avoidance of sexual transmission to women of child-bearing age.

Agency for International Development (A.I.D.)

A.I.D. is the lead U.S. agency in international AIDS prevention and control efforts. A.I.D.'s field staff and its cooperating agencies responsible for implementation are experienced and active in over 70 countries. The Health, Child Survival, Population, and Education programs of A.I.D. have pioneered work in service delivery and communications as well as in technical assistance and training immediately relevant to the prevention of HIV transmission. The Agency's policy and programs are built on these strengths in areas in which the U.S. has a particular comparative advantage.

The Agency's AIDS policy, adopted formally in April 1987, can be summarized as follows:

1. Support for the WHO/GPA is the cornerstone of the Agency's program. All bilateral programs will operate within the framework of WHO/GPA's national plans.

2. Aggressive bilateral programs to implement the WHO/GPA national plans will be focused on prevention and control.

3. Research will be limited to program operations needs, adapting U.S. research products to developing country needs, and meeting the urgent developing country needs that may not be a high U.S. domestic research priority.

Since the adoption of this policy, the Agency has moved rapidly to develop a program of bilateral support for prevention and control of HIV transmission in developing countries. This support is provided in 6 major areas: 1) technical assistance and training, 2) provision of commodities, including condoms, 3) support of private voluntary organization (PVO)-led programs, 4) dissemination of technical information and materials, 5) intervention-oriented research, and 6) modelling to project the impact of the pandemic. The first four will be discussed here and the latter two in the next section on research.

The Agency provides short-term and long-term technical assistance and training in the areas of surveillance, behavior change and risk reduction, blood transfusion screening, sexually transmitted disease management and control, and planning for sustainable health-care financing. As of December 1988, the Agency has provided short-term technical assistance to 34 countries in Africa, Asia and the Near East, and Latin America and the Caribbean. In addition, long-term resident advisors have been stationed in the Dominican Republic and the Philippines, and long-term prevention projects, most often in the area of behavior change and risk reduction, have been organized in the majority of these countries.

Through its Population program, the Agency has extensive experience and mechanisms for procurement, shipping, and distribution of commodities. In the last two years, these mechanisms have been used to deliver condoms and blood screening reagents and equipment to more than 45 countries worldwide.

Recognizing the rapid response capacity of PVOs and that PVOs work at the community level which national programs may fail to reach, the Agency is also seeking to stimulate and support PVO-led AIDS prevention and control activities. In 1987 and 1988, A.I.D. and its cooperating agencies have conducted and participated in a number of workshops and conferences on PVO programs for AIDS prevention. The Agency and its field missions are funding PVO AIDS prevention projects in 13 countries. In FY 1988, over $2 million in bilateral assistance programs was provided to PVOs. A small grants program encourages new organizations and innovative activities.

In addition to providing direct technical assistance, the Agency supports AIDS prevention programs by worldwide dissemination of technical information and materials. These consist largely of journal articles and prevention program-related guidelines distributed on a bi-monthly basis to over 400 individuals and institutions in 70 countries.

The Agency's budget for this bilateral support has increased rapidly. In FY 1986, the Agency had no bilateral program. In FY 1987, the budget was $11.4 million. In FY 1988, it increased to approximately $15 million. In FY 1989, the Agency expects to provide $14.5 million, a slight decrease due to Congressional reordering of the Administration request. In FY 1990, a further increase to $20 million is planned. In addition to these amounts, related support from the Health and Population programs and the Development Fund for Africa totals approximately $5 million a year.

Although the Agency funding for bilateral HIV-related activities has increased from nothing to $20 million a year in a four-year period while the total available for foreign assistance has remained relatively constant, it is clear that the staff resources and program funds are not meeting the need. There is a backlog of unfunded requests approaching $7 million, and requests are frequently delayed or reduced because of competing demands. Consequently, even this $7 million figure may understate the real needs as delays in meeting existing requests discourage the formulation of needed new programs.

At present, funding for bilateral programs is relatively more constrained than that available for the WHO/GPA. This will affect the global effort and progress in controlling the spread of HIV infection. The WHO/GPA has performed outstandingly in the coordination and planning of a system of national AIDS control programs. However, WHO is encountering understandable bottlenecks in attempting to build a field implementation capacity. Delayed delivery of goods and services requested from the WHO/GPA by cooperating countries is increasing. Bilateral programs are organized to meet and can meet many of these needs. U.S. funding of bilateral activities is a limiting factor.

In the next three years, the A.I.D. program will continue in the general direction already established. The basic framework is in place. The policy approach focusing on prevention and control and the comparative advantage the Agency has in field delivery of health and communications services has proven to be sound and cost-effective. Working relationships and coordination with the WHO/GPA are excellent. The level of commitment of all governments involved in the global AIDS prevention effort is extraordinary. The issues that arise usually concern how to get something done, not what to do. Therefore, progress in implementing bilateral program will be limited primarily by the resources available and the inherent constraints to rapid change in developing countries. Geographically, Africa will continue to receive priority attention, but relatively more focus will probably be placed on Asia and the Near East and Central and South America as the pandemic becomes more evident there.

Public Health Service

Of the six Public Health Service (PHS) agencies, four are engaged in international AIDS-related activities. The Centers for Disease Control (CDC) in Atlanta works in the area of epidemiology. The Food and Drug Administration (FDA) is working to provide drugs for testing and treatment in the developing world. The National Institutes of Health (NIH) and the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) have the lead in promoting and carrying out research in AIDS. Of these, only the CDC focuses on AIDS prevention and control internationally. These activities are discussed here, while the research activities of CDC and the other agencies are discussed in the next section.

The CDC provides leadership and direction for a broad range of programs designed to safeguard and improve the health of the American people. It is involved in health risk reduction in the workplace, and general health promotion. It also provides support in the basic areas of epidemiology, disease surveillance, laboratory science, and training to local, state, national and international disease prevention efforts. The CDC supports a number of AIDS efforts under its international mission. CDC activities include: 1) providing staff to A.I.D. for short-term technical assistance for AIDS in developing countries. This occurs both in the host country and, for visiting foreign scientists, in the Atlanta facilities. 2) Staff from the CDC provide technical assistance to health programs in developing countries in support of the capacity-building mission of the WHO/GPA. 3) The CDC also collaborates in the development of a WHO Center on Health Education & Health Promotion for School- and College-Aged Youth; this WHO Center has a major new focus on AIDS. 4) Training in HIV antigen and antibody detection methods for laboratory personnel is being provided by the CDC for a PAHO/WHO project.

The CDC is committed to continued support for this bilateral and multilateral effort. The CDC will spend $1.8 million from A.I.D. over the next two years and a projected total of $6 million over a five year period for its technical assistance programs.

Peace Corps

The Peace Corps promotes world peace and friendship by sending volunteers abroad to help people of other nations to meet their need for trained manpower. Volunteers promote better understanding of Americans among the people with whom they live and work as well to promote a better understanding of other peoples on the part of the American people. Peace Corps programs

are designed to meet the basic needs of those living in the poorest areas of the countries in which the Peace Corps operates.

The Peace Corps has committed its resources to responding to the AIDS crisis. Working within the guidelines of the WHO/GPA, the Peace Corps is attempting to establish a series of pilot projects in AIDS education. These projects will be developed in close cooperation with the host countries within the frameworks of the hosts' national priorities. These programs will then be evaluated to determine what services the volunteers can deliver best and what kinds of capacities can be built in other countries by replicating these projects.

There are presently six thousand volunteers working in sixty-five countries. Their programs involve health, education, agriculture, rural development, small business enterprise, and conservation of natural resources. The health volunteers are placed to improve the health service delivery and capacity-building for the section of the country assigned; AIDS has been a very specific topic many health centers have been able to accommodate. In the general and specific capacity of the volunteers, the Peace Corps is able to contribute to the local community by using the knowledge and skills of the volunteers to prevent further AIDS spread.

The costs of these programs are difficult to predict because they will represent only a portion of a volunteer's efforts. Furthermore, health issues are only a secondary function for many of the non-health volunteers, and diseases other than AIDS are more frequently encountered by the health volunteers. Nevertheless, the Peace Corps is committed to maintain and enlarge its efforts as opportunities in host countries and volunteer availability may allow.

Veterans Administration

The Veterans Administration has many hospitals and facilities at which AIDS patients are treated. These represent a resource which could be used for training of developing country personnel in blood screening techniques, surveillance methods and other technical issues related to AIDS. The Veterans Administration plans to consider developing this possibility during the next three years.

RESEARCH ACTIVITIES

Current Research Priorities

Because of the difficulties in preventing the spread of AIDS, it is imperative that alternative tools for combatting it be developed. These will be the product of research, both basic and applied.

The first tool likely to be developed is a treatment to decrease the destruction of the immune system caused by HIV or to reduce transmission from those who are infected. When AIDS was first shown conclusively to be caused by HIV, in 1984, prospects for a therapeutic agent seemed grim. Antiviral agents are generally scarce and have little effectiveness against the viral diseases and retroviruses, of which HIV is an example, are particularly difficult to treat. That grim outlook has improved dramatically, however. One treatment, AZT, while far from being a cure, has shown some promise already. Study of the life cycle of the virus has enabled researchers to design potential treatments which capitalize on vulnerabilities of the virus.

A second research priority is development of a vaccine against HIV infection. Production of a vaccine against HIV has several inherent technical difficulties. First, the virus attacks the very cells which should attack it. Second, the virus can change its coat, thus disguising itself against attack by the body's immune system. Third, there is no good animal model of the disease in which to develop vaccine candidates. Fourth, the virus often wraps itself in fragments of the host's own cell membranes, cloaking itself against recognition as an invader. Nevertheless there are several potential vaccines which are being tested in humans at this time. Although few scientists are optimistic about their effectiveness, new and improved vaccine candidates are being developed constantly.

A third research priority is the natural history and epidemiology of the disease itself. For example, the role that other infections play in the progression of disease is still not fully understood. The role of other sexually transmitted diseases in facilitating transmission demands further study. The possibility that close relatives of the virus might have evolved in their relationships with their own hosts in such a way as to reduce the mortality or morbidity of the infection is also a candidate for scrutiny.

Finally, operations research to improve existing methods of prevention and control must be continued and expanded. While great strides have been made in changing the high-risk behaviors of some groups of people (e.g. the homosexual populations in the U.S. and elsewhere) there are other examples in which little has

been accomplished. Use of condoms, although increasing, is still at very low level. In Africa, where HIV is rampant, the rate of condom use is less than 1%. There are recent reports that this trend is being reversed, however. In Kinshasa and in Bangui, both cities where condom distribution is being handled by commercial enterprise, the demand exceeds the supply. Research into extending and replicating these changes is needed.

Public Health Service

The PHS agencies have taken the lead in international HIV-related research as well as development of international research collaboration and cooperation. The CDC has a major domestic and international role in research on the natural history of HIV-related disease as well as on epidemiological surveillance systems. The international research activities in these areas involve Cote d'Ivoire (Ivory Coast), Kenya, Sierra Leone, and Zaire; the Zaire project, sponsored in 1983, is also sponsored by the NIH (NIAID). These have major importance to the host country and to the U.S. investigators as opportunities for longitudinal studies are made available. A major contribution will be in the study of HIV-2 in the African continent. CDC researchers will also be able to investigate HIV infection in areas where diarrheal and respiratory diseases are very prevalent in the general population and may often confuse or delay the diagnosis of HIV infection. A total of about $9 million will be spent by CDC on these programs during the next three years.

The FDA role is one of drug and vaccine development and regulation. It has provided a major contribution to building the capacity of host countries to carry out this role. One area for this leadership is as a major WHO Collaborating Center on AIDS; this allows the FDA, among other things, to collaborate on assay assessment, to provide technical assistance on safety of blood-derived products and serological testing systems, provide reference panels of sera, and provide training for laboratory and public health personnel. The FDA also reviews requests for, and authorizes, the export of drugs and biologicals which are not yet approved in the U.S. These substances will be used in clinical investigations in foreign countries within the bounds of FDA regulations for this purpose. This allows items under development to have wider clinical evaluations while ensuring host country approval of the trials. Additionally, under the provisions of the Drug Exports Amendments Act of 1986, the FDA authorizes U.S. pharmaceutical manufacturers to export human and animal drugs and human biologicals, not yet approved for use in this country, to any of 21 countries that listed in the Act and whose drug regulatory authorities have approved their use. Unapproved drugs and biologicals used for AIDS detection and treatment are exported under either of the two conditions described above. The FDA provides technical assistance to the

regulatory agencies of about 60 countries. Development of AIDS drugs and vaccines has increasingly been the focus of the consultation provided. There is also a monthly collection of information on FDA-related articles, speeches, and other non-journal based information which is furnished to PAHO and WHO.

The National Institutes of Health are the center of the Federal government's health research. Their mission is to uncover new knowledge that will lead to better understanding of the fundamental life processes that underlie human health and better means to prevent, detect, diagnose, and treat disease. NIH works toward these goals by conducting research in its own laboratories; supporting research of non-Federal scientists in universities, medical hospitals, and research institutions throughout the U.S. and abroad; supporting the training of promising new researchers; and fostering and supporting biomedical communication. The NIH has made a significant contribution to the definition of AIDS, understanding its progression, and investigating preventive/therapeutic options. The NIH plans to continue to make contributions through its research programs and training programs, on which it will spend about $21 million in FY 1989 (see Appendix 2: $12.2 million through NIAID, $2.8 million from NCI, $1.0 million from NICHHD and $ 4.7 million from FIC).

The NIH also contributes to capacity-building through the Fogarty International Center (FIC). The FIC will spend nearly $4 million through the International Training Grants In Epidemiology Related To AIDS program in FY 1989. This program operates through eight universities which take responsibility for development work with selected countries; this year the program will impact at least 21 different countries. The FIC also has an International Postdoctoral Research and Training Grant program which operates through four universities. The program will expend $700,000 in FY 89 and will recruit Fellows from at least nine countries.

The National Institute of Drug Abuse has two major projects which focus on the intravenous drug use transmission route. This effort involves some mathematical modeling and the building of a database of experiences in developing countries. About $600,000 will be expended during the period FY 1989-1991.

It should be noted that the recent PHS authorization legislation pertaining to HIV infection underscores the importance of international collaboration, research and training related to this worldwide problem.

Department of Defense

The Assistant Secretary of Defense for Health Affairs is responsible for Department of Defense health matters, including preventive medicine, medical readiness, health-care delivery, drug and alcohol abuse prevention, and procurement, development, and retention of medical personnel. The Department has a worldwide scope of activities and, as such, has operating bilateral and multilateral defense agreements. These agreements allow the U.S. to maintain laboratories which can study region-specific disease impact on military forces and develop effective preventive and treatment techniques. These laboratories also allow the U.S. to provide consultation to host country or multilateral member medical personnel.

AIDS is one of the health problems studied by this worldwide system of laboratories. The system is in place in Egypt, Japan, Peru, Philippines, Zaire, and Zambia. Expansion of the programs to include AIDS began as early as FY 1986. Most of the AIDS studies are epidemiological and the results have immediate application for host military and civilian organizations, especially in developing countries, and are focused on region-specific aspects of the natural history of the disease. Plans call for these laboratories to continue to support the U.S. defense mission and responsibilities through AIDS-related research.

Agency for International Development

AIDS-related research funded by A.I.D. is applied and intervention-oriented. Of highest priority is program-oriented operations research in behavior change, condom and viricide promotion, and blood transfusion screening. Epidemiological research is examining HIV transmission, in particular the influence of other sexually transmitted diseases. New prevention technologies important for developing countries are also being field-tested. These include new diagnostics and new condom formulations, such as the female condom, designed to empower women to protect themselves from HIV infection.

Examples of this research can be found in all regions of the developing world. In Ghana and Mexico, operations research is being conducted to determine the best means of extending short-term successes in reduction of high-risk behavior. In Zaire, a recent clinical trial examined the utility of five simple and rapid HIV antibody tests for blood transfusion screening in developing countries. A follow-on study will attempt to reproduce these results in isolated rural hospitals. In cooperation with WHO and UNICEF, A.I.D. is funding the development and testing of disposable, non-reusable syringes and needles to ensure that immunization programs do not transmit HIV.

Projecting the Impact of the Pandemic: Modeling

Our understanding of the extent of HIV infection and the consequences of international control strategies is frequently rudimentary at best. The infrastructure in the developing world to collect reliable health data needs to be improved, but this will be a long and probably slow process. Nevertheless, all U.S. agencies involved in the international aspects need more reliable data on the extent of infection and possible impact. This was recognized by Admiral Watkins in his report which urged it be given a high priority.

The complexities of the HIV pandemic lend themselves to mathematical modeling. The modeling process simulates reality and forecasts possible trends and provides insights into the dynamics of the pandemic. The necessity of such an appraisal was recognized early and led to the establishment of an Interagency Working Group on AIDS Models and Methods. The Working Group is a subcommittee of the State Department's Interagency Working Group on International Aspects of AIDS, established in 1985. It is chaired by the Department of State and includes A.I.D., the Bureau of the Census, CDC, DOD, and members of the intelligence community. The subcommittee is a vehicle for sharing information and coordinating research. Its mission is to develop mathematical models and to make projections on the impacts of HIV infection and AIDS in affected countries. The subcommittee expects to have a fully tested and validated model which can forecast the epidemiologic scope and demographic impact HIV infection and AIDS by the end of FY 1989.

PROGRAM AND POLICY COORDINATION

AIDS is a U.S. domestic, foreign policy, and national security issue. It has a broad societal, political, and economic impact. It is a priority concern of several federal departments and agencies and an important interest of many others. An effective mechanism of cooperation and coordination is essential to ensure that international HIV-related activities by the U.S. government are cost-effective and focused on priorities. Three areas of coordination are important: multilateral coordination, coordination within the U.S. government, and coordination with the private for-profit and not-for-profit sector. Formal coordination mechanisms to meet these needs are described below, however, the value of informal coordination through close ongoing relationships cannot be overstated.

Coordination with multilateral agencies such as the WHO/GPA, other United Nations agencies, and other governments and bilateral donors occurs through the committees of the WHO/GPA. These include the Management Committee, which meets twice yearly to discuss prevention and control activities, and the scientific and technical committees, which monitor prevention strategies and research.

Two formal coordination mechanisms exist within the U.S. government. In order to carry out the Congressional mandate to coordinate international activities by U.S. federal agencies, A.I.D. has chaired the FCCIS since October 1988. Prevention and control activities and related research are reviewed in the FCCIS, convened by the Public Health Service. The FCCIS has compiled a database of all international AIDS activities by U.S. government agencies. It allows consideration of activities by agency, by country, by type of activity, etc. A print-out from that database is contained in Appendix 1. The impact of the pandemic on other countries and on U.S. foreign policy is reviewed by the Interagency Working Group on the International Aspects of AIDS, convened by the State Department.

The private sector has a critically important role to play in controlling the spread of HIV infection. Non-governmental agencies can be extraordinarily effective in delivering community-based AIDS education and health services in the developing world. Many are already doing so. Through the National Council for International Health, a process of regular consultation on AIDS issues has been instituted with PVOs. A.I.D. is exploring similar consultations with the private, for-profit sector, through the National Leadership Coalition on AIDS.

BUDGET IMPLICATIONS

The action plan for FY 1989-1991 is an extension of programs and activities now underway. The framework for international activities is set by the WHO/GPA planning process and is largely in place in the developing world. The WHO/GPA expects to have global and national AIDS plans in place by the end of 1989. The U.S. has committed itself to work within this WHO/GPA planning process. The basic elements of these plans are sound, and there is a broad consensus that they address the right issues in the right priority.

The estimate, based on WHO/GPA's analysis, of the annual cost of WHO/GPA national plans approaches $750 million. This includes several activities, such as the promotion of condoms, which will have to be commercialized through the private sector. It also includes the contributions of the recipient countries. The need for external support to the national AIDS prevention and control programs is therefore in the order of $400 million.

The U.S. support for international AIDS prevention and control and related research by all agencies reflected in this action plan was $88 million through FY 1988 and is estimated to be $65 million in FY 1989. The estimates, by agency, are summarized in Table 1 below. As stated, the budget data cover only those aspects that can be directly attributed to international AIDS activities. The estimates give no value to the substantial knowledge, experience, and research products which will come from U.S. domestic programs in the next three years. This knowledge and experience will undoubtedly be of significant benefit internationally.

The U.S. has been providing 20% to 25% of the WHO/GPA budget and a comparable share of the budgets of national AIDS control programs in those countries in which A.I.D has economic assistance programs. Maintaining this contribution to the global effort will require maintaining and even slightly increasing the U.S. contribution in real terms.

Table 1

U.S. Government Obligations for International AIDS Activities, by Agency and Fiscal Year, in Thousands of Dollars

AGENCY	To Date	FY89
A.I.D.	48900	40000
D.o.D.	4986	1426
ADAMHA	613	0
CDC	3801	2939
NIH	30000	20701
TOTAL	88300	65066

Source: International Subcommittee of the Federal Coordinating Committee on AIDS

CONCLUSIONS

HIV infection and AIDS are widespread in much of the developing world. The pandemic has major political, economic, social and security implications for developing countries, and is therefore a major public policy issue for them and a major foreign policy and national security issue for the U.S.

These implications were recognized by the international community, and the WHO was asked within the UN system to take international leadership and mobilize a worldwide response to the pandemic. WHO formed the WHO/GPA under the auspices of the donor community. The WHO/GPA has moved with extraordinary speed and outstanding effectiveness to establish cooperative relationships with all countries wishing help with their AIDS control and prevention programs. WHO/GPA actions have included the establishment of national AIDS committees, the initiation of short-term emergency activities, and the development and implementation of national AIDS control programs.

The U.S. has fully supported WHO/GPA in this effort by detailing senior personnel, providing contractor services, and financing the WHO/GPA. The U.S. and all other donor nations have committed to working within the policy and program framework of the individual WHO/GPA national AIDS control programs. The WHO/GPA plan for the period from 1989 to 1991 is the U.S. plan. The U.S. endorses its major elements, implements it with support for the WHO/GPA and extensive bilateral activities, and cooperates with all donors and affected countries to ensure that U.S. resources are coordinated and focused on the priority activities of these WHO/GPA plans.

During the three-year period from 1989 to 1991, the WHO/GPA expects to have put into place national plans in all cooperating countries and to have undertaken the evaluation and re-design of those eligible for renewal. The three-year cost of this WHO/GPA global prevention and control program is approximately $1.5 billion, for an annual cost of $500 million.

The WHO/GPA worldwide effort is closely coordinated with the ongoing bilateral activities of all donors. Its success depends upon a strong and continuing response from all donors through their bilateral programs. WHO/GPA estimates that approximately 90% of the funding for this global AIDS prevention and control program will need to be provided by bilateral donors. The contributions of bilateral donors to date have met the need, but increased levels of bilateral support will be required if the full global program is to be realized.

For these reasons, the U.S. action plan for the prevention and control of AIDS in the developing world includes both continued support for the WHO/GPA global effort and major bilateral activities by the various federal agencies concerned with the international aspects of AIDS prevention and control. The continuation of a significant bilateral assistance program which takes full advantage of the special skills and capacities the U.S. can bring to this problem is essential to the success of the global plan.

The strengths of the various U.S. agencies concerned with the international aspects of AIDS prevention and control have been summarized above. Their programs are expected to continue to be focused during the action plan period largely as they are now. The U.S. research effort is not discussed at any length in this action plan but is vital. The search for a better understanding of transmission, and for better tools to arrest transmission and cure those who are infected must continue.

The variety of U.S. programs reflects the complexity of the issues which must be addressed in dealing with the prevention and control of the spread of HIV infection. To ensure that these programs draw from areas of comparative strengths, are focused on the correct priorities, and take into account the resources and the skills available in the private sector and in the international community requires careful and close coordination. The coordination arrangements among federal departments, with the WHO/GPA and other donors, and with the U.S. private for-profit and not-for-profit sector are in place. Sound working relationships in these areas have been formed and will need to be broadened and strengthened during the action-plan period.

To date, the funds available from the donors have met all of the WHO/GPA's needs, and the funding requests for the national prevention and control plans have been oversubscribed. However, U.S. funding and that of other donors will need to increase further if the needs of the WHO/GPA and the national plans are to continue to be met.

The targeted design of the individual national AIDS programs makes it difficult to aggregate accomplishments. Nevertheless, the following achievements are illustrative of the progress anticipated during the period of this three-year action plan:

1. All countries with which the U.S. is working will have implemented AIDS and HIV public information campaigns.

2. All of these countries will also have implemented, and most will have evaluated, targeted educational programs aimed at the reduction of high-risk behavior.

3. All of these countries will have implemented blood transfusion screening programs for HIV. There will be a safe source in each country, however, only a few will have ensured complete freedom of the blood supply from HIV infection.

4. New rapid, simple HIV diagnostics appropriate for developing countries will have been field-tested and will be in common use.

5. Development of vaccine field trial sites will have taken place.

6. Models of the economic and demographic impact of the pandemic in the developing world will have been completed and validated and will be in use to further understanding and to more effectively target HIV control strategies.

APPENDIX 1

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]	[illegible]	[illegible]	[illegible]
AID	S&T/H	Africa	New Interventions
AID	S&T/H	Africa	HCF Projects
AID	S&T/H	Africa	Technical Assistance
NCI	FCRF-PRI	Africa	Characterization of AIDS: Vaccine Development of AIDS-Causing Viruses: Studies in Africa
NCI		Africa	Outstanding Investigator Grant
NCI	FCRF-PRI	Africa	Characterization of the Human Response to HIV (FCRF-PRI)
NCI	OIA	Africa	HIV-Related Cancers in Africa (International Agency for Research on Cancer)
NICHHD	CRMC	Africa	(to be added)
FIC		Argentina	International Training in AIDS Epidemiology
AID	S&T/H	Asia	HCF Projects
AID	S&T/H	Asia	Technical Assistance
AID	S&T/H	Asia	Drug Surveillance
AID	S&T/H	Asia	New Interventions
AID	S&T/H	Bahamas	Condom Marketing: High-risk Men and Women
AID	S&T/H	Bahamas	Small Scale Education Operations Research: Drug Users
AID	S&T/H	Bahamas	Education Campaign: Carnival '89
AID	S&T/H	Bahamas	Prevention Counseling Training: Health Care Workers

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]	[illegible]	Belgium	[illegible]
AID	S&T/H	Barbados	Social Marketing Technical Assistance
		Barbados	Population Survey in Barbados
AID	S&T/H	Barbados	Cost-effective strategies for treating AIDS patients
AID	S&T/H	Barbados	Prevention Counseling Training: Health Care Workers
NCI	DCT	Belgium	Molecular Pharmacology of Anti-HIV Agents in Human T-Cell Lines
NIAID	AIDS/VRDB	Belgium	Development of Vaccines to Prevent AIDS
NIDDKD		Belgium	Analogs of Nucleic Acids and Their Components as Potential Anti-HIV Agents
AID	S&T/H	Bolivia	Small Scale Education Operations Research: High-Risk Men
AID	S&T/H	Bolivia	Health Care Provider Training
AID	S&T/H	Brazil	Communications Through Art
CDC		Brazil	CDC/Brazil HIV Collaboration
CDC	TLP/DIT	Brazil	HIV Antigen and Antibody Methods Training
CDC	TLP/DIT	Brazil	Training course: Serodiagnosis of HIV Infections
FIC		Brazil	Epidemiology Training Program
FIC		Brazil	International AIDS Training Program
FIC		Brazil	International Training in AIDS Epidemiology
FIC		Brazil	Special Postdoctoral Research Program in AIDS

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]		[illegible]	[illegible]
FIC		Brazil	International Training Grants in Epidemiology of AIDS
NCI		Brazil	Population Survey in Brazil
NIAID	AIDSP'EE	Brazil	International Collaboration in Acquired Immunodeficiency Syndrome (AIDS) Research (ICAR)
NIAID	IRP	Brazil	(to be added)
AID	S&T/H	Burkina Faso	Blood Technical Assistance
AID	S&T/H	Burkina Faso	Intervention with high-risk group
AID	S&T/H	Burkina Faso	Technical Assistance
AID	S&T/H	Burkina Faso	Expanded Intervention
NCI		Burkina Faso	Outstanding Investigator Award/ Seroepidemiologic Surveys of Central and West Africa
AID	S&T/H	Burundi	National Regional Communications Workshops
AID	S&T/H	Burundi	Sentinel surveillance
AID	S&T/H	Burundi	Intervention with high-risk group
AID	S&T/H	Burundi	Expanded Intervention
FIC		Burundi	International Collaboration on AIDS Research
AID	S&T/H	Cameroon	Blood screening
AID	S&T/H	Cameroon	Intervention expanded with high-risk group
NCI		Canada	Multicenter Hemophilia Cohorts

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INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]	[illegible]	[illegible]	[illegible]
FIC		Caribbean	International Training in AIDS Epidemiology
NICHHD		Caribbean	Hormonal and Barrier Contraception and HIV Infection
FIC		China	International Training in AIDS Related Epidemiology
AID	S&T/H	Colombia	Small Scale Education Operations Research: High-Risk Men
AID	S&T/H	Colombia	National Information Campaign
FIC		Colombia	International Training Grants in Epidemiology of AIDS
FIC		Congo	International Collaboration on AIDS Research
NCI		Denmark	Multicenter Hemophilia Cohorts
NCI		Denmark	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NCI		Denmark	Prospective Cohort Studies of Gay Men in Denmark
AID	S&T/H	Dominican Republic	Blood screening needs assessment
AID	S&T/H	Dominican Republic	Puerto Plata: Intervention with high-risk group
AID	S&T/H	Dominican Republic	Sentinel surveillance
AID	S&T/H	Dominican Republic	Santo Domingo: Intervention with high-risk group
AID	S&T/H	Dominican Republic	Peer Educator Training
AID	S&T/H	Dominican Republic	Private sector initiation
AID	S&T/H	Dominican Republic	Workplace Information Campaign

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]	S&T/H	Dominican Republic	[illegible]
AID	S&T/H	Dominican Republic	Small Scale Operations Research Studies: High-Risk Men
AID	S&T/H	Dominican Republic	Small Scale Operations Research Studies: High Risk-Women
AID	S&T/H	Dominican Republic	Health Care Provider Training
AID	S&T/H	Dominican Republic	Expanded Intervention
FIC		Dominican Republic	International AIDS Training Program
AID	S&T/H	Eastern Caribbean	Expanded Intervention
AID	S&T/H	Eastern Caribbean	Workshop for health care providers
AID	S&T/H	Eastern Caribbean	Media Workshops
AID	S&T/H	Eastern Caribbean	Cost-effectivness of blood screening program
AID	S&T/H	Eastern Caribbean	Small Scale Operations Research Studies: High-Risk Women
AID	S&T/H	Ecuador	Health Care Provider Training
AID	S&T/H	Ecuador	Small Scale Operations Research Studies: High-Risk Men and Women
AID	S&T/H	Ecuador	Technical assistance
AID	S&T/H	Ecuador	Sentinel surveillance
AID	S&T/H	Ecuador	National Information Campaign
AID	S&T/H	Ecuador	Intervention with high-risk group
AID	S&T/H	Ecuador	Hotline Operations Research

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]		Ecuador	[illegible]
CDC	[illegible]	Egypt	Training course: Serodiagnosis of HIV Infections
DoD	NAMRU-3	Egypt	Assessment of AIDS in Western Asia
AID	S&T/H	El Salvador	Intervention with STD clinic patients
AID	S&T/H	El Salvador	Technical assistance
AID	S&T/H	El Salvador	National Information Campaign
AID	S&T/H	El Salvador	Condom Marketing through Family Planning
AID	S&T/H	El Salvador	Health Care Provider Training
NIAID		England	Structural Studies of HIV Envelope Glycoprotein
NCI		Fed. Rep. Ge	Immunologic Studies: HIV Neutralizing Antibodies and Vaccine Development
NCI		France	Cancer Etiology Studies in France
NCI		France	Multicenter Hemophilia Cohorts
CDC	CPS	Geneva	WHO Meeting to Formulate Recommendation for HIV-infected Children in EPI Countries
AID	S&T/H	Ghana	Intervention with Military
AID	S&T/H	Ghana	Cost effectiveness of Ghana Intervention
AID	S&T/H	Ghana	Sentinel surveillance
AID	S&T/H	Ghana	Rapid test evaluation
AID	S&T/H	Ghana	Intervention expanded with high-risk groups

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
NCI		Ghana	Population Survey in Ghana
NCI		Greece	Cancer Etiology Studies in Greece
NCI		Greece	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NCI		Greece	Multicenter Hemophilia Cohorts
NCI		Greenland	Studies of Heterosexual Cohorts in Greenland
AID	S&T/H	Guatemala	Small Scale Operations Research Studies: High-Risk Men and Women
AID	S&T/H	Guinea-Bissau	Outstanding Investigator Award/Seroepidemiologic Surveys of Central and West Africa
AID	S&T/H	Haiti	Intervention with high-risk group
FIC		Haiti	International Training in AIDS Epidemiology
FIC		Haiti	International Training in AIDS Epidemiology
FIC		Haiti	International Training Grants in Epidemiology of AIDS
FIC		Haiti	Special Postdoctoral Research Program in AIDS
NCI		Haiti	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NIAID	AIDSP/EP	Haiti	HIV and HTLV-I Cohort Studies of Haiti Women and Infants
NIAID	IRP	Haiti	(To be added)
NIAID	AIDSP.EP	Haiti	Natural History of HIV Infection (AIDS) in Haiti
AID	S&T/H	Honduras	Hotline Training of Trainers
AID	S&T/H	Honduras	National Information Campaign

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
AID	S&T/H	Honduras	Social Marketing: Technical Assistance
AID	S&T/H	Honduras	Small Scale Education Operations Research: High-Risk Men
AID	S&T/H	Honduras	Condom Marketing
AID	S&T/H	Honduras	Hotline Operations Research
NIAID	AIDSF/DTB	Israel	Production of Antisera and Recombinant Proteins for Research in AIDS
CDC		Ivory Coast	PROJET RETRO-CI
NCI		Ivory Coast	Outstanding Investigator Award/ Seroepidemiologic Surveys of Central and West Africa
		Jamaica	Population Survey in Jamaica
AID	S&T/H	Jamaica	Rural Outreach Program
AID	S&T/H	Jamaica	AIDS/STD Hotline
AID	S&T/H	Jamaica	Small Scale Operations Research Studies: High Risk Women
AID	S&T/H	Jamaica	Condom Marketing: Rural Outreach
AID	S&T/H	Jamaica	Prevention Counseling Training: Peer Counseling Volunteers
AID	S&T/H	Jamaica	Prevention Counseling Training: Health Care Workers
AID	S&T/H	Jamaica	National Information Campaign: Technical Assistance
AID	S&T/H	Jamaica	Prevention Counseling Training: Hotline Operators
AID	S&T/H	Jamaica	Condom Marketing: High-Risk Men
AID	S&T/H	Jamaica	Small Scale Operations Research Studies: Farmworkers and Commercial Traders

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
AID	S&T/H	Jamaica	Condom Marketing: High-Risk Women
AID	S&T/H	Jamaica	Hotline Operations Research
AID	S&T/H	Jamaica	Small Scale Operations Research Studies: High-risk Men
NCI		Jamaica	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NCI		Jamaica	Prospective Cohort Studies of Gay Men in Jamaica
NCI		Jamaica	Cancer Etiology Studies in Jamaica and Trinidad
NCI		Jamaica	Studies of Heterosexual Cohorts in Jamaica
DoD	NH-Okinaw	Japan	HTLV-I Seroconversion in Military Populations in Okinawa
NCI		Japan	Multicenter Hemophilia Cohorts
NIAID		Japan	U.S./ Japan Cooperative Medical Science Program
NIAID	AIDSP/DTB	Japan	Development of the Pine Cone Extract as Novel Drug for Treatment of AIDS
NIDDKD		Japan	Analogs of Nucleic Acids and Their Components as Potential Anti-HIV Agents
AID	S&T/H	Kenya	Blood bank data management
AID	S&T/H	Kenya	Rapid test evaluation
AID	S&T/H	Kenya	Intervention with Truck Drivers
AID	S&T/H	Kenya	Intervention expanded with high-risk group
AID	S&T/H	Kenya	Expanded Intervention
AID	S&T/H	Kenya	Expanded Rapid test

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
AID	S&T/H	Kenya	Technical assistance
AID	S&T/H	Kenya	Blood screening
CDC		Kenya	Microsporidia: Potential Etiologic Agents of Diarrhea and Wasting in Patients with AIDS
FIC		Kenya	Special International Postdoctoral Research Program in AIDS
FIC		Kenya	Special Postdoctoral Research Program in AIDS
FIC		Kenya	International Epidemiology Training Program
NCI		Kenya	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NIAID	IRP	Kenya	(to be added)
NIAID	AIDSP/EB	Kenya	Epidemiology of HIV Transmission in Africa
AID	S&T/H	Latin America	Prevention Counseling Training: Health Care Workers
FIC		Latin America	Special International Postdoctoral Research Program in AIDS
NIAID		Latin America	Studies of HIV Infection
AID	S&T/H	Latin America	Drug Surveillance
AID	S&T/H	Latin America	New Interventions
AID	S&T/H	Latin America	HCF Projects
AID	S&T/H	Latin America	Technical Assistance
NIAID	AIDSP/EB	Latin America	Studies of HIV and other Related Retroviruses and Its Consequences in the Caribbean and Latin America
AID	S&T/H	Malawi	Small Scale Operations Research Studies: High-Risk Men and Women

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
FIC	S&T/H	Malawi	Preventive Medicine Training Materials at Three
FIC		Malawi	International Training Grants in Epidemiology of AIDS
NIAID	AIDSP/EB	Malawi	International Collaboration in Acquired Immunodeficiency Syndrome (AIDS) Research (ICAR)
AID	S&T/H	Mexico	Development of disease surveillance survey
AID	S&T/H	Mexico	Expanded Intervention
AID	S&T/H	Mexico	Hotline Operations Research
AID	S&T/H	Mexico	Intervention with high-risk group
AID	S&T/H	Mexico	Small Scale Operations Research Studies: High-Risk Men
AID	S&T/H	Mexico	Data Analysis Training
AID	S&T/H	Mexico	Direct treatment and prevention costs
AID	S&T/H	Mexico	Condom Marketing for High-Risk Men
CDC	TLP/DIT	Mexico	HIV Antigen and Antibody Methods Training
CDC	TLP/DIT	Mexico	Training course: Serodiagnosis of HIV Infections
FIC		Mexico	International Training in AIDS Epidemiology
FIC		Mexico	International Training in AIDS Related Epidemiology
NIAID	AIDSP/EB	Mexico	International Collaboration in Acquired Immunodeficiency Syndrome (AIDS) Research (ICAR)
NICHHD		Mexico	Sex Hormones and HIV-Positive Women
FIC		Mozambique	International Epidemiology Training Program

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
NCI		New Guinea	Population Survey in New Guinea
AID	S&T/H	Nigeria	Expanded Intervention
AID	S&T/H	Nigeria	KAP/Condom Survey and Marketing
AID	S&T/H	Nigeria	Intervention with high-risk group
NCI		Nigeria	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
AID	S&T/H	N/A	AIDS Technical Support Project
AID	S&T/PO	N/A	Condom Distribution
AID	S&T/H	N/A	Support for GPA
FIC		Pacific Rim	Special International Postdoctoral Research Program in AIDS
CDC	TLP/DIT	Pakistan	HIV Antigen and Antibody Methods Training
CDC	TLP/DIT	Pakistan	Training course: Serodiagnosis of HIV Infections
CDC	TLP/DIT	Panama	Training course: Serodiagnosis of HIV Infections
CDC	TLP/DIT	Panama	HIV Antigen and Antibody Methods Training
AID	S&T/H	Peru	Health Care Provider Training
AID	S&T/H	Peru	Small Scale Operations Research Studies: High-Risk Men
AID	S&T/H	Peru	Technical assistance
AID	S&T/H	Peru	AIDS Information Hotline
AID	S&T/H	Peru	Peer Educator Training

INTERNATIONAL AIDS ACTIVITIES

Agency	Initiative	Country	Project Title
AID	S&T/H	Peru	Condom Marketing for High-Risk Men and Women
AID	S&T/H	Peru	Hotline Operations Research
AID	S&T/H	Peru	Intervention with high-risk group
CDC	ILP/DIT	Peru	HIV Antigen and Antibody Matrices Training
DoD	NAMRID	Peru	Epidemiology and Natural History of HIV Infection in Militarily Relevant Geographic Areas
FIC		Peru	International Training in AIDS Epidemiology
AID	S&T/H	Philippines	National Information Campaign
AID	S&T/H	Philippines	Small Scale Operations Research Studies on High-Risk Women
AID	S&T/H	Philippines	Data Analysis Workshop
AID	S&T/H	Philippines	Expanded Intervention
AID	S&T/H	Philippines	Blood screening needs assessment
AID	S&T/H	Philippines	Blood Pooling study
AID	S&T/H	Philippines	Condom Promotion
AID	S&T/H	Philippines	Small Scale Operations Research Studies on High-Risk Men
AID	S&T/H	Philippines	Communications Workshop
AID	S&T/H	Philippines	Intervention with High-Risk Group
AID	S&T/H	Philippines	STD Technical Assistance
FIC		Philippines	International Epidemiology Training Grant in AIDS

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	STATE	PROJECT TITLE
CDC	[illegible]	[illegible]	Epidemiology and Natural Hist[illegible] of [illegible] Relevant Geographic Areas
CDC	[illegible]	[illegible]	[illegible] and [illegible] Retrovirus Testing
AID	S&T/H	Rwanda	Mass Media Research on Targeting Audience/ Messages
AID	S&T/H	Rwanda	Condom Marketing for High-Risk Men
FIC		Rwanda	International Collaboration on AIDS Research
FIC		Rwanda	Special Postdoctoral Research Program in AIDS
FIC		Rwanda	International Training Grants in Epidemiology of AIDS
NIAID	AIDSF/EB	Rwanda	African AIDS: Risk Factors, Virology and Pathology
NIAID		Rwanda	Epidemiological Studies of AIDS
NIMH	CAPS	Rwanda	Center for AIDS Prevention Studies
AID	S&T/H	Senegal	Rapid test evaluation
AID	S&T/H	Senegal	KAP Survey/ Intervention
AID	S&T/H	Senegal	Expanded Rapid test
AID	S&T/H	Senegal	Expanded Intervention
FIC		Senegal	International Epidemiology Training Program
FIC		Senegal	International Training in AIDS Related Epidemiology
FIC		Senegal	Special Postdoctoral Research Program in AIDS
FIC		Senegal	Special International Postdoctoral Research Program in AIDS

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
[illegible]		Senegal	[illegible] Central and West Africa
NIAID	[illegible]	Senegal	[illegible]
CDC		Sierra Leone	Study of AIDS Infections in the Eastern Province of Sierra Leone
FIC		Singapore	Epidemiology Training Program
DoD		South America	
NICHHD		Spain	Research and Development Laboratory for the Seroepidemiologic Study of HIV Seroprevalence in Child-bearing Women
AID	S&T/H	St. Lucia	Intervention with high-risk group
AID	S&T/H	St. Vincent	Social Marketing Technical Assistance
AID	S&T/H	St. Vincent	Campaign: Carnival '89
AID	S&T/H	St. Vincent	Condom Marketing: High-Risk Men and Women
AID	S&T/H	St. Vincent	Prevention Counseling Training: Health Care Workers
AID	S&T/H	St. Vincent	Condom Marketing: Promotion Among the General Public
AID	S&T/H	St. Vincent	Small Scale Operations Research Studies: High-Risk Men and Women
AID	S&T/H	Swaziland	Prevention Counseling Training for Health Care Providers
AID	S&T/H	Swaziland	Communications Research on Media Mix
NCI	[illegible]	Sweden	Development of Anti-HIV Specific Agents and Treatment Approaches
AID	S&T/H	Switzerland	Condom Programming Worldwide
FIC		Taiwan	International Training in AIDS Related Epidemiology

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INTERNATIONAL AIDS ACTIVITIES

AID	S&T/H	Tanzania	Research and Training on Prevention Counseling and Efficacy
AID	S&T/H	Tanzania	Small Scale Operations Research Studies: High-Risk Men and Women
AID	S&T/H	Tanzania	Intervention with high-risk group
AID	S&T/H	Tanzania	Technical assistance
AID	S&T/H	Tanzania	Conference on AIDS and associated cancers
NCI		Tanzania	Population Survey in Tanzania
NCI		Tanzania	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
AID	S&T/H	Thailand	Communications Planning
AID	S&T/H	Thailand	IV Drug User Counselor Training
AID	S&T/H	Thailand	Intervention with Drug Abusers
AID	S&T/H	Thailand	Intervention with high-risk group
AID	S&T/H	Thailand	Expanded Intervention
FIC		Thailand	International Epidemiology Training Grant in AIDS
AID	S&T/H	Trinidad & Tobago	Prevention Counseling Training: Hotline Operators
AID	S&T/H	Trinidad & Tobago	Small Scale Operations Research Studies: High-Risk Men
AID	S&T/H	Trinidad & Tobago	Small Scale Operations Research Studies: High-Risk Women

INTERNATIONAL AIDS ACTIVITIES

AGENCY	DIV OF	COUNTRY	SPECIFIC ACTIVITY
AID	S&T/H	Trinidad & Tobago	Small Scale Operations Research Studies: High-Risk Men and Women
AID	S&T/H	Trinidad & Tobago	Behavioral Surveys
AID	S&T/H	Trinidad & Tobago	Media Workshops
AID	S&T/H	Trinidad & Tobago	Hotline Operations Research
AID	S&T/H	Trinidad & Tobago	Blood Pooling Study
AID	S&T/H	Trinidad & Tobago	Condom Marketing: High-Risk Women
AID	S&T/H	Trinidad & Tobago	National AIDS Hotline
AID	S&T/H	Trinidad & Tobago	Cost-recovery for blood screening program
NCI		Trinidad & Tobago	Studies of Heterosexual Cohorts in Trindidad
NCI		Trinidad & Tobago	Cancer Etiology Studies in Jamaica and Trinidad
NCI		Trinidad & Tobago	Epidemiology of human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NCI		Trinidad & Tobago	Prospective Cohort Studies of Gay Men in Trinidad
NIAID	IRP	Trinidad & Tobago	(to be added)
AID	S&T/H	Uganda	Small Scale Operations Research Studies: High-Risk Men and Women in Commercial Operations
AID	S&T/H	Uganda	Prevention Counseling Training TASO
AID	S&T/H	Uganda	Support Programs for National Information Campaign
AID	S&T/H	Uganda	Small Scale Operations Research Studies: High-Risk Men and Women in Factories
AID	S&T/H	Uganda	Condom Marketing for High-Risk Men

INTERNATIONAL AIDS ACTIVITIES

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		Uganda	[illegible]
[illegible]	AIDS EE	Uganda	International Collaboration in Acquired Immunodeficiency Syndrome (AIDS) Research (ICAR)
NICHHD		Uganda	Research and Development Laboratory for the Seroepidemiologic Study of HIV Seroprevalence in Child-bearing women
NIAID	AIDS/DTB	United Kingdom	Miami-National Cooperative Drug Discovery Group: AIDS
NIAID	AIDS/DTB	United Kingdom	Production of Antisera and Recombinant Proteins for Research in AIDS
AID	S&T/H	USA	Washington AAA Meeting
AID	S&T/H	USA	Technical Advisory Group
AID	S&T/H	USA	Information Dissemination
AID	S&T/H	USA	AIDSTECH Package
AID	S&T/H	USA	Workshop for cooperating FF agencies (with INTRAH)
AID	S&T/H	USA	Pan American Teleconference
AID	S&T/H	USA	Modelling
NIH	CMS	USA/ Canada	Statistical Methodology for the Study of the AIDS Epidemic
NCI		Venezuela	Novel Retroviruses from South America: HTLV-type Viruses
CDC	CCH/DASH	Worldwide	Proposed CDC/WHO Collaborating Center on Health Education and Health Promotion for School- and College-Aged Youth
FIC		Worldwide	International Postdoctoral Research in AIDS
NCI		Worldwide	International Registry of HIV Seroconverters
NCI	DCE	Worldwide	Epidemiology of Human Lymphotropic Viruses: ATL, AIDS and Cancer

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
NCI	DCT	Worldwide	Preparation of Anti-AIDS Drugs for Clinical Studies
NCI		Worldwide	Multicenter Hemophilia Cohorts
NCI		Worldwide	Immune Effector Mechanisms in EBV Carrying Patients
NIAID	AIDS/DTB	Worldwide	National Cooperative Drug Discovery Groups for the Treatment of AIDS
NIAID	AIDS/VRDS	Worldwide	HTLV-III/LAV Sequence Data Base and Analysis
NIAID	Quinn	Worldwide	NIH Research and Reference Reagent Program
NIAID	AIDS/DTB	Worldwide	Production of Retrovirus Stocks for AIDS Research
NICHHD		Worldwide	Studies of Sexual Behavior and Prophylactic Condom Use
NIDA	CMB	Worldwide	International Cooperation in Research on AIDS and IV Drug Abuse
AID	S&T/H	Zaire	Intervention with high-risk group
AID	S&T/H	Zaire	AIDS module development
AID	S&T/H	Zaire	Expanded Intervention
AID	S&T/H	Zaire	Rapid test evaluation
AID	S&T/H	Zaire	Expanded Rapid Test
AID	S&T/H	Zaire	
CDC		Zaire	HIV Prevention Project
CDC	CPS	Zaire	Community Based Study of Measles Severity in HIV-infected and Uninfected Children

INTERNATIONAL AIDS ACTIVITIES

AGENCY	OFFICE	COUNTRY	PROJECT TITLE
CDC	[illegible]	Zaire	Measles in Hospitalized African Children Infected with HIV
CDC	CPS CID	Zaire	Safety and Immunogenicity of Routine Childhood Immunizations of Children Infected with HIV.
CDC	CPS	Zaire	Retrospective and Prospective Study of the Safety and Immunogenicity of Routine Childhood Immunization
CDC	CID	Zaire	Projet SIDA
DoD	AFIP	Zaire	
FIC		Zaire	International Collaboration on AIDS Research
FIC		Zaire	International Training in AIDS Related Epidemiology
NCI		Zaire	Epidemiology of Human HTLV Lymphotropic Viruses: ATL, AIDS and Cancer
NIAID	IRP	Zaire	Projet SIDA
NIAID	AIDS/EB	Zaire	International Collaboration in Acquired Immunodeficiency Syndrome (AIDS) Research (ICAR)
NIAID		Zaire	Epidemiologic, Immunologic Aspects of AIDS in Africa
DoD	USUHS	Zambia	Non-Venereal Cofactors in HIV Infection in Zambia
NCI		Zambia	Epidemiology of Human HTLV
NCI		Zambia	Cancer Etiology Studies in Zambia
AID	S&T/H	Zimbabwe	Intervention with high-risk group
AID	S&T/H	Zimbabwe	Equipment/supply hospitals
AID	S&T/H	Zimbabwe	LAF Module
AID	S&T/H	Zimbabwe	Intervention with STD Clinic Patients

INTERNATIONAL AIDS ACTIVITIES

NIH	Clin.	Zimbabwe	Prevention Counseling for Physicians, Nurses and Med. Students
FIC		Zimbabwe	International AIDS Training Program

FIC Zimbabwe International Epidemiology Training Program

APPENDIX 2

Current and Planned International AIDS Research and Related Activities

A. I. Research Programs

The need for international collaboration on a biomedical problem, AIDS, has never been more important. AIDS has clearly been shown to be a disease which knows no national boundaries, having now been reported from over 140 countries. International studies have already contributed critical information related to understanding the natural history of AIDS, major modes of HIV transmission and risk factors for HIV infection. Studies in other countries have provided vital information in such areas as characterization of existing and identification of new infectious agents, understanding heterosexual transmission and documenting the effects of AIDS upon women and children. Research conducted in other countries is of direct benefit to U.S. citizens and often provides unique opportunities to improve our knowledge and understanding of HIV infection and AIDS. Progress in the international efforts against HIV depends upon strong, long term support for biomedical research.

International AIDS Research at the National Institutes of Health (NIH)

Historically, international collaboration has been an important part of the NIH response to the global AIDS epidemic. The National Institutes of Health and the Centers for Disease Control (CDC) have been collaborating with scientists from Belgium and Zaire in the support of pioneering studies of the epidemiology of AIDS in Africa since 1983. NIH supported research, in collaboration with investigators from the Pasteur Institute in France, resulted in the identification of HIV as the etiologic agent for AIDS. The NIH has been closely coordinating its efforts with those of the World Health Organization (WHO) Global Program on AIDS (GPA). The NIH has been designated as a WHO Collaborating Center on AIDS. NIH scientists and NIH-supported researchers worldwide have played prominent roles in the various international conferences on AIDS with NIH having been primarily responsible for organizing the III International Conference on AIDS held in Washington, DC in June 1987. The NIH, under existing agreements, has also shared clinical protocols for NIH-sponsored drug evaluation studies with German and French scientists in an effort to obtain data comparable to that obtained in U.S. trials. For

example, a multicenter study of the pulmonary complications of HIV infection was expanded to include participating institutions from both Germany and France.

The NIH is planning to spend in excess of $15 million on International AIDS research during FY 89. Including research-related training, the total international NIH efforts related to AIDS in FY 89 is expected to exceed $20 million. A summary of these efforts is shown in the accompanying table. These research endeavors are focused mainly in 3 of the NIH Institutes, the National Institute of Allergy and Infectious Diseases, the National Cancer Institute and the National Institute of Child Health and Human Development. A number of other NIH components also have or are planning international AIDS research and related activities. In this regard, the Fogarty International Center (FIC) has taken a leadership role in the development of international research training related to AIDS at the NIH.

NIH international research efforts involve both intramural and extramural programs. The research includes studies which take advantage of unique research opportunities in foreign countries. These

endeavors also involve collaborative research which depends to a great extent upon participation by scientists in other countries. The following is a brief summary of these research activities.

Anticipated Expenditures for International AIDS Activities at the NIH During FY 89

Organizational Component	Anticipated Expenditures
National Institute of Allergy and Infectious Diseases	$12,188,671
National Cancer Institute	2,833,600
National Institute of Child Health and Human Development	1,000,000
Fogarty International Center	4,679,000
Total	$20,701,471

INTERNATIONAL ACTIVITIES OF THE UNITED STATES GOVERNMENT AGAINST THE

ACTION PLAN

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1 OF 1 (24X)
1988